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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/642,009	08/21/2000	Akinori Yasutake	080542/0151	9222

22428 7590 06/06/2003

FOLEY AND LARDNER  
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WASHINGTON, DC 20007

EXAMINER
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HENDRICKSON, STUART L

ART UNIT	PAPER NUMBER
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1754

12

DATE MAILED: 06/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

642089

Applicant(s)

Max Yawtke

Examiner

Herbison

Group Art Unit

119

— The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

☒ Responsive to communication(s) filed on 3/21/03

☐ This action is FINAL.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 6, 7, 20-30, 39-55 is/are pending in the application.
- ☐ Of the above claim(s) is/are withdrawn from consideration.
- ☐ Claim(s) is/are allowed.
- ☒ Claim(s) 6, 7, 20-30, 39-55 is/are rejected.
- ☐ Claim(s) is/are objected to.
- ☐ Claim(s) are subject to restriction or election requirement

Application Papers

- ☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- ☐ All ☐ Some\* ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

\*Certified copies not received: \_\_\_\_\_

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_
- ☐ Interview Summary, PTO-413
- ☐ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other \_\_\_\_\_

Office Action Summary

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The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action. The request filed on 3/26/03 for Continued Examination (RCE) based on parent Application No. 09/642009 is acceptable.

Claims 6, 7, 20-30 and 39-55 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-5 of U.S. Patent No. 6106791. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims encompass the patented treatment temperatures. The examples provide the process details (heating time, etc.) of the dependent claims. The patented carbon is hydrophobic due to the treatment.

Claims 6, 7, 20-30, 39-42 and 45-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ninomiya et al. taken with Japan '176.

Ninomiya teaches in columns 1-3, 5 and ex.1 contacting active carbon with NO<sub>x</sub>, SO<sub>x</sub>, water and oxygen. This differs in not teaching treated fibers, however the '176 abstract teaches treated active carbon fibers.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the '176 fibers in the process of Ninomiya because doing so fibers have a higher surface area (and thus active sites) per gram than spherical particles do, making the process more efficient. Further, it would treat the NO<sub>x</sub> in the Ninomiya stream. The flow rate is an obvious optimization of throughput or scale of reaction; In re Boesch 205 USPQ 215.

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Claims 6, 7 and 20-30, 39-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamada taken with Japan '176.

Hamada teaches in column 1, 3 and 4 contacting active carbon with NO<sub>x</sub>, SO<sub>x</sub>, water and oxygen. This differs in not teaching treated fibers, however the '176 abstract teaches treated active carbon fibers.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the '176 fibers in the process of Hamada because doing so fibers have a higher surface area (and thus active sites) per gram than spherical particles do, making the process more efficient. Further, it would treat the NO<sub>x</sub> in the Hamada stream.

Applicant's arguments filed 3/26/03 have been fully considered but they are not persuasive. No restriction between 'treating SO<sub>x</sub> and NO<sub>x</sub>' versus 'treating SO<sub>x</sub>' was made, so the restriction is proper. The references are combinable because '176 teaches a carbon material desired by the other references, and is deemed to be also hydrophobic due to how it was made. While acid treatment creates surface oxy groups which are hydrophilic, the overall character is still hydrophobic due to the low number of these groups; no difference is seen. Further experimentation on this aspect appears appropriate. Previous arguments from paper 6 apply.

Any inquiry concerning this communication should be directed to examiner Hendrickson at telephone number (703) 308-2539.



Stuart Hendrickson  
examiner Art Unit 1754